THERMOSCAN

Rapid-Scan Mobile Infrared Camera

APPLICATION

Rapid-scanning heavy-duty mobile infrared camera for the photographic display of skin temperature distributions of the human body, a process known as Thermography.

FEATURES

- Designed specifically for medical use.
- One minute scan time.
- Rapid aiming in any direction.
- Fully counterbalanced scanner on extendable boom.
- Temperature resolution 0.1° F.
- Spacial resolution 150 elements/line.
- Temperature range selection for picture gradient control.
- Picture black level control.
- Easy to use projected light spot focus control.
- Focus control 18" to infinity.
- Spot temperature measuring feature.
- Recorder output.
- Simplified controls.
- Heavy duty mobile base and scanner stand.
- "Dead-man" type handbrake for easy, positive action.
- Pearl grey enamel finish with bright metal trim.

SPECIFICATIONS

Operation Time: 60 sec. for scanning full field-of-view and 10 sec. for Polaroid film development.

Field-of-View: 15° x 20°. (e.g., 8" x 10" at 18", 19" x 25" at 60".)

Focus and Aiming: A spot of light projected through the optical system indicates size of instantaneous field-of-view, size of frame (total field-of-view) and focal position.
Scanner may be aimed in any direction for full spherical coverage.

Recorder Output: A 0-to-1 volt signal is provided for recording the temperature measurements on a continuous recorder. Electrical signals are superimposed on the output signal to indicate the start of each scanned line.

Electronic Components: All solid state except cathode ray tube.

Mobility: Rolls on large wheels at center of gravity with two rear "tip-back" wheels.

Power: 115 volts, 60 cps, single phase, 5 amps.

Scanner

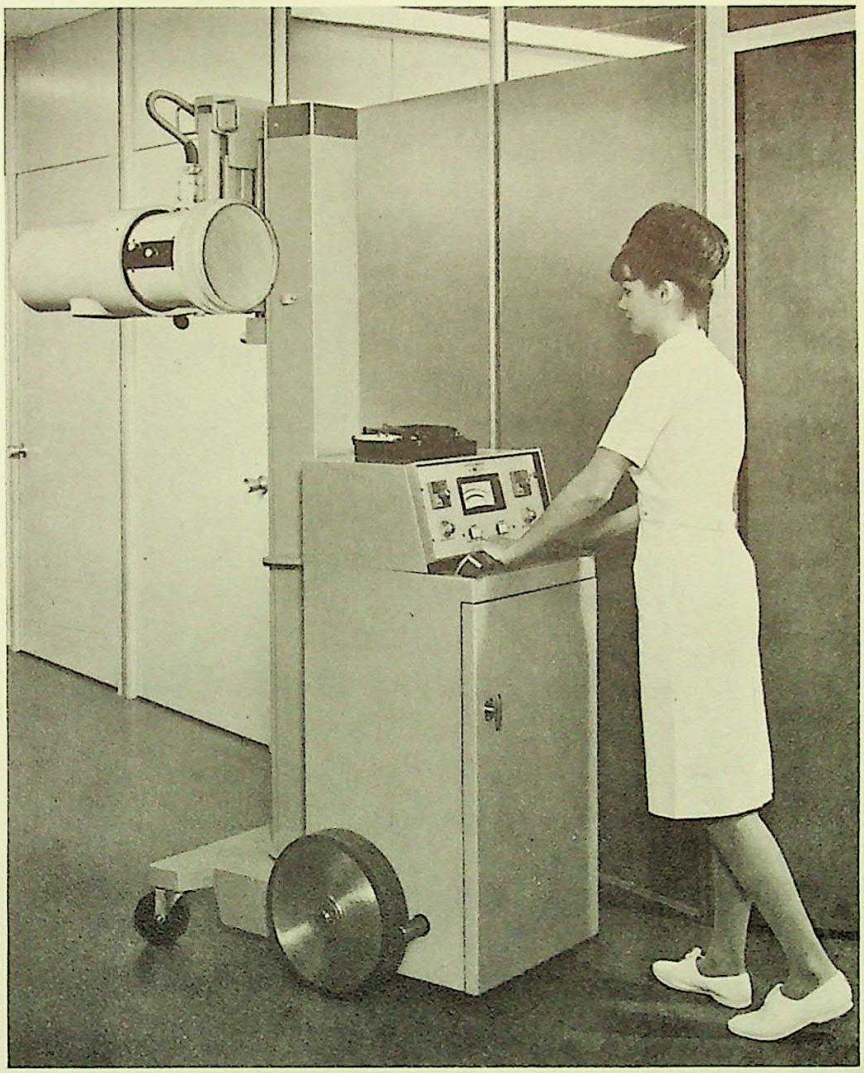
Precision optical assembly with f/2 Cassegrainian optical system. Front surface plane scanning mirror.

Detector – Infratron indium antimonide infrared detector thermoelectrically cooled for optimum performance.

Focus Control – for adjusting focus from 18" to infinity by means of spot of light projected through the system.

Control Unit

Modular construction. All components mounted on removable front panel for easy servicing.



Meter – for direct reading of absolute temperature either in point or scan modes. Includes 6" mirror scale and illuminated dial.

Meter Switch – three-position rotary for selecting quantity to be read by meter.

Power Switch – controls all power to the Thermoscan.

Adjust-Record Switch – two-position switch for selection of automatic or manual mode.

Vertical and Horizontal Position Switch– permits camera to be aimed for spot temperature measurements and for single line scanning.

Temperature Range Selector–sets black-to-white range of picture at 2, 3, 5, 7, 10, 15 or 20° F.

Temperature Level Control–sets black level of picture at any temperature from 86° to 104° F.

Operate Button–automatically starts scan.

Power Supply

Modular construction for ease of servicing.

Provides regulated voltages throughout the Thermoscan. Regulation for variation in line, load or temperature.

Thermoelectric Cooler Power Supply

Provides current to the detector cooler.

Feedback temperature control maintains detector temperature at –60° C.

Modular construction for ease of servicing.

Oscilloscope-Camera Display

5" diam. cathode ray tube with horizontal and vertical deflection circuits synchronized with scanner.

Multi-element f/3.5 lens.

Graflok camera back accepts 4x5 Polaroid Land film or standard 4x5 cut-film holders.

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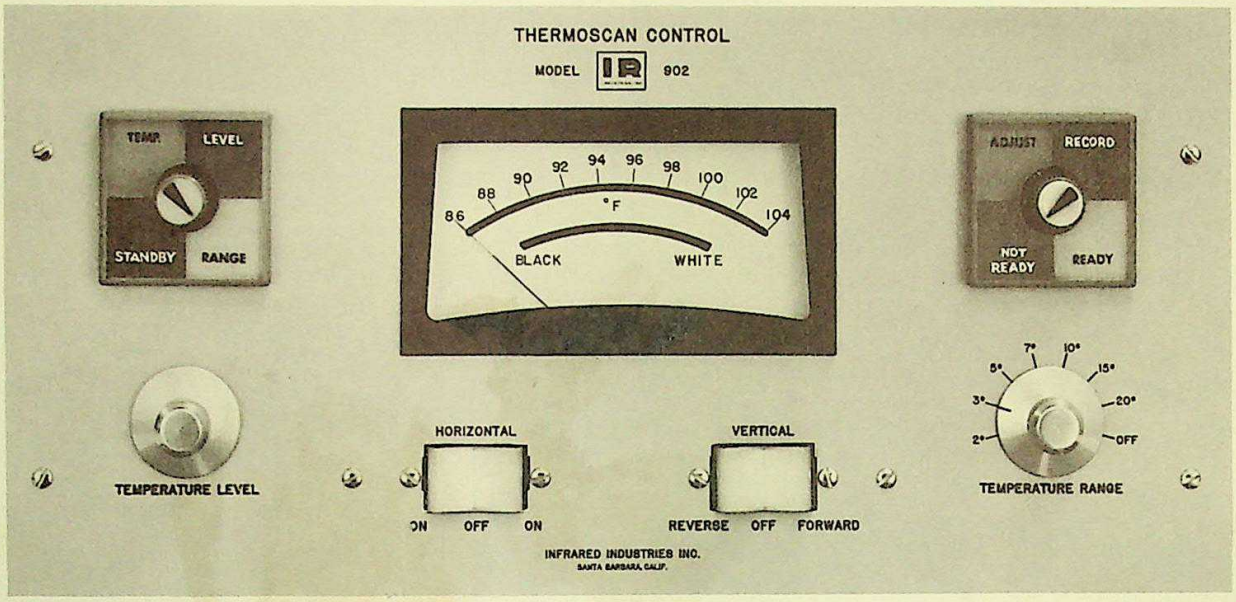
THERMOSCAN CONTROL PANEL



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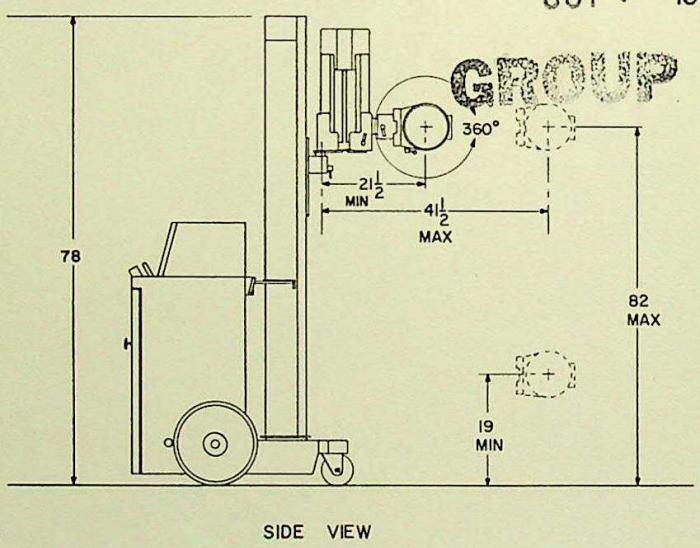
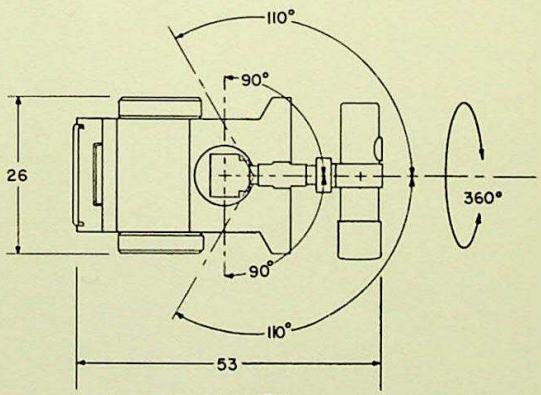


SIDE VIEW

Minimum Parking Area:
38" wide x 48" long



PLAN VIEW

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Mobile Base and Cabinet

Base supports entire unit. Has two central 14" wheels with non-marking polyurethane. Two swivel type 5" casters in front, and two rear "tip-back" wheels to provide easy access to elevators. "Dead-man" type hand-brake must be grasped along with push handle to move unit. When brake is released, unit is automatically braked.

Cabinet supports scanner control and houses power supplies. Hinged door for access to interior.

Scanner Stand

Construction — rigid, fabricated - metal structure supporting scanner and folding-bracket arm, and housing related counter-balancing weights.

WEIGHTS

Complete unit weighs net 975 lbs.; shipping 1,200 lbs.

CHANGES

Right reserved to make changes in any specifications.

WARRANTY

The published company warranty on date of shipment shall apply.

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